

Infrastructure:

Has Order been released yet?

My comments are on file and on Twitter feed/blog

18-22

- Unlike Pioneer's Preference §7 is part of Comm Act and has been so for 30+ years
- §7 was Congressional reaction to FCC's shabby treatment of ~1980 Steven's Engineering request for new Part 90 technology at the behest of *then* dominant Motorola
https://www.its.bldrdoc.gov/publications/download/84-156_ocr.pdf
- Only FCC clarification has been requirement in M2Z ruling that issue must be raised by proponent at first filing
 - ATSC 3.0 proponents did so, but FCC totally ignored discussing their request - fear of precedent?
- RM-11713 is the "poster child" of the need for §7 clarification
 - Right to petition USG enshrined in BOTH Constitution and APA
 - Right is meaningless unless agency acts/disposes on petition in a plausible period
 - While "Wright Petition" dealt with nontechnical matter and has jurisdictional issues, shabby treatment it received even after *mandamus* proceeding is a general FCC issue in **all proceedings**
 - Prominent law firm consulted in 11713 petition advised against raising §7 issue fearing FCC would "punish" petitioner for raising it by using excessive delay!
 - After 2 years w/o FCC action, petitioner (multibillion dollar R&D lab) canceled project, fired staff and vowed never to do speculative NG spectrum research subject to nonroutine FCC approval
- 2nd sentence of §7(a) is key question but not raised in NPRM
 - "Any person or party (other than the Commission) who opposes a new technology or service proposed to be permitted under this chapter shall have the burden to demonstrate that such proposal is inconsistent with the public interest."
 - What does FCC think it means? "Burden" test?
 - Specifically, isn't NTIA a "person or party (other than the Commission)"?
 - In reality, Coase's ~1962 pre-NTIA criticism of IRAC
 (https://www.rand.org/pubs/drafts/DRU1219.html at p. 44-50) is just as true today as in the 1960s - he even quotes previous studies *a decade earlier* on similar points!
 - NTIA routinely defers to IRAC on most issues and often doesn't even subject most IRAC findings to "smell test"
 - Good example is Docket 18-21 NPRM unwillingness to even consider sharing of passive bands (fn. 79)
 - Do 5G issues dominate FCC/NTIA high level dialogue so much that other spectrum issues are ignored?

- In mmW bands NTIA routinely rejects initial experimental license applications that overlap passive bands independent of interference threat based on an internal NASA policy - no apparent NTIA oversight of such IRAC/FAS decisions!
- FCC should consider asking Congress to clarify law with respect to what action is needed within 1 year and a "safety valve" to allow FCC to extend period for a limited time if it finds a good reason in a specific case

Data from Lazarus filing in "Wireless Innovation" NOI/09-157

Docket No.	Request	Start	End	Duration
WT 04-143	rulemaking – adding narrower bandwidths to 18 GHz fixed service band	05/04/2001 ^a	12/29/2006	66 mos.
ET 98-156	rulemaking – directional unlicensed power at 24 GHz	10/20/1997	02/13/2002	52 mos.
WT 07-54	rulemaking – smaller antennas in 11 GHz fixed service band	07/14/2004	10/31/2007	39 mos.
ET 99-231	rulemaking – unlicensed Wi-Fi "g" standard (digital modulation devices)	02/17/2000 ^b	07/25/2002	27 mos.
ET 06-195	waiver – UltraVision Security Systems perimeter security device	10/06/2006	11/20/2008	25 mos.
ET 04-373	waiver – SafeView security screening device	08/18/2004	08/04/2006	24 mos.
WT 09-114	rulemaking – conditional licensing on additional channels in 23 GHz fixed service band	11/07/2007	6/11/2010	31 mos.
ET 00-47	rulemaking – software-defined radios	03/21/2000	02/04/2002	22 mos.
WP 08-63	waiver – ReconRobotics surveillance robot	01/11/2008	2/23/2010	25 mos.
WT 09-114	rulemaking – adding wider bandwidths to 6 GHz fixed service band	02/04/2008	6/11/2010	28 mos.
WP 09-2	waiver – L-3 CyTerra public safety radar	02/22/2008	11/25/09	21 mos.
NOTES (a) Date of <i>ex parte</i> statement in IB Docket No. 98-172 proposing 18 GHz channel plan. (b) Date on which Wi-LAN, Inc. filed an Application for Review of denial of certification of an OFDM device under § 15.247. The Commission effectively treated that application as a petition for rulemaking. <i>Spread Spectrum Devices</i> , 16 FCC Rcd 10036 (2002).				

What ever happened to this proceeding?

18-21

- Parallel issues being discussed in WRC-19 AI 1.15 on 275-450 GHz
 - NASA being very obstinate -- with NTIA condoning their action (since they're an IRAC member). NSF quite reasonable - as always
 - FCC/IB has become supportive of NG spectrum use recently
- Like 5G, do we just want to follow Europe, or do want is best for US?
- Unlike lower bands, passive bands above 95 GHz use a larger fraction of spectrum AND balkanize spectrum into smaller blocks
- 2008 Beijing Olympics used Japanese 120 GHz unit for video that had key US licensed technology!
 - Never marketed in US due to regulatory barriers!
- Shabby treatment of RM-11713 petition
 - Possible topic for new independent FCC IG?
- Terahertz spectroscopy equipment at 50-500 GHz now being manufactured & marketed for industrial/manufacturing uses in US but suppliers face significant regulatory uncertainty if investor want "due diligence" - made worse by 2/18 OET ruling requiring "case by case" review under Part 18
 - Actually technology transfer of NASA Space Shuttle safety R&D
 - NPRM avoids topic - possibly at NTIA request
- While fiber optics is cheapest for backhaul/data links on equipment cost/mile, in some cases installation costs dominate
- Part 101 100-140 GHz systems ideal for niche applications needing quick installation (*e.g.* post-earthquake/disaster service restoration) or temporary large events in remote area
- NASA/NTIA rigidity on considering sharing based on US246 notion of no transmitters in passive bands
 - While sensible for bands below 50 GHz, not physical reason why it applies above 50 GHz
 - "mmWave/THz spectrum is NOT VHF with a few extra zeroes"!

Passive Spectrum Above 95 GHz

